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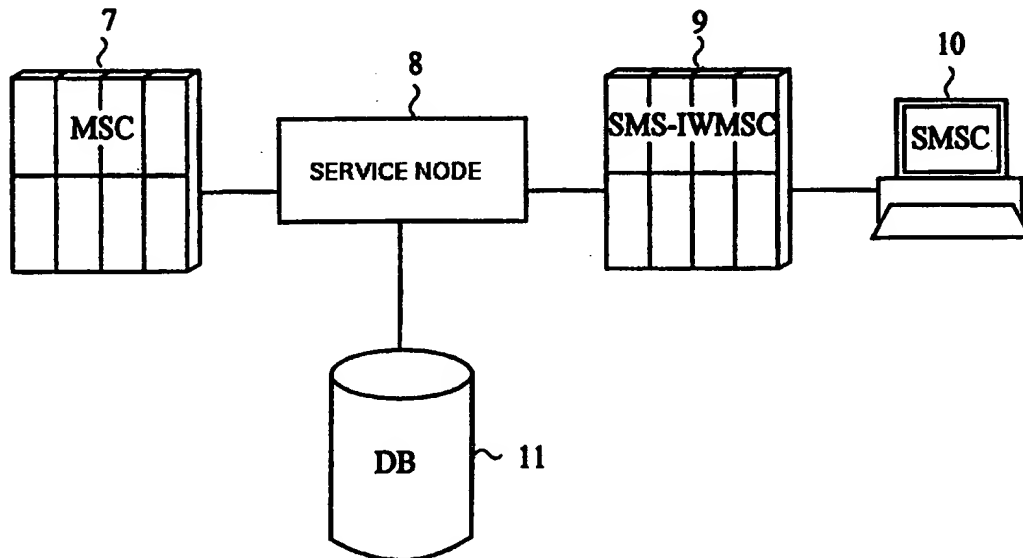
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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)-

| | | | |
|---|--|--|--|
| (51) International Patent Classification ⁶ : H04Q 7/22 | | A3 | (11) International Publication Number: WO 99/29125 |
| | | | (43) International Publication Date: 10 June 1999 (10.06.99) |
| (21) International Application Number: PCT/FI98/00936 (22) International Filing Date: 1 December 1998 (01.12.98) (30) Priority Data: 974384 1 December 1997 (01.12.97) FI (71) Applicant (for all designated States except US): SONERA OY [FI/FI]; Sturenkatu 16, FIN-00510 Helsinki (FI). (72) Inventors; and (75) Inventors/Applicants (for US only): HUOPANIEMI, Juho [FI/FI]; (FI). GRÖHN, Tuomo [FI/FI]; (FI). VORMISTO, Jari [FI/FI]; Sonera Oy, Sturenkatu 16, FIN-00510 Helsinki (FI). (74) Agent: PAPULA REIN LAHTELA OY; Fredrikinkatu 61 A, P.O. Box 981, FIN-00101 Helsinki (FI). | | (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report. In English translation (filed in Finnish). (88) Date of publication of the international search report: 12 August 1999 (12.08.99) | |

(54) Title: SYSTEM AND PROCEDURE FOR DIRECTING A SHORT MESSAGE



(57) Abstract

The present invention relates to a system for directing a short message to a virtual subscriber number. Moreover, the invention relates to a system for directing a short message to a subscriber-specific VPN subscriber number (Virtual Private Network, VPN). Furthermore, the invention relates to a procedure for directing a short message to a virtual subscriber number. The invention also relates to a procedure for directing a short message to a subscriber-specific VPN subscriber number.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 98/00936

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: H04Q 7/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | WO 9409599 A1 (NOKIA TELECOMMUNICATIONS OY), 28 April 1994 (28.04.94), page 5, line 24 - page 11, line 20 -- | 1-3,5-9, 11-12 |
| A | WO 9535620 A1 (AETHOS COMMUNICATIONS SYSTEMS), 28 December 1995 (28.12.95), see whole document -- | 1-29 |
| X,E | GB 2327571 A (ORANGE PERSONAL COMMUNICATIONS SERVICES LIMITED), 27 January 1999 (27.01.99), page 4, line 13 - page 21, line 7 -- ----- | 1-3,5-9, 11-12 |

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Date of the actual completion of the international search

3 June 1999

Date of mailing of the international search report

09 -06- 1999

Name and mailing address of the ISA/

Swedish Patent Office

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INTERNATIONAL SEARCH REPORT
Information on patent family members

03/05/99

International application No.

PCT/FI 98/00936

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---------------------|------------------------------|----------------------|
| WO 9409599 A1 | 28/04/94 | AU 5113693 A FI 924801 A | 09/05/94 23/04/94 |
| WO 9535620 A1 | 28/12/95 | GB 2290675 A GB 9412474 D | 03/01/96 00/00/00 |
| GB 2327571 A | 27/01/99 | GB 9715244 D | 00/00/00 |